

AMENDMENTS TO THE CLAIMS, COMPLETE LISTING OF CLAIMS
IN ASCENDING ORDER WITH STATUS INDICATOR

Please cancel claims 1-9, 11-19, 23-31, 44 and 45 without prejudice or disclaimer, and amend claims 10, 20-22 and 32-35, as indicated.

Claims 1-9 (Cancelled).

10. (Currently Amended) ~~The A~~ sulfenyl compound according to claim 1, represented by the general formula:



(wherein R represents an organic group having at least one constituent element labeled with an isotope, and X represents a leaving group),

wherein the sulfenyl compound is selected from the group consisting of 2-nitro[¹³C₆] benzenesulfenyl chloride, 4-nitro[¹³C₆] benzenesulfenyl chloride, 2, 4-dinitro[¹³C₆] benzenesulfenyl chloride, and 2-nitro-4-carboxy[¹³C₆] benzenesulfenyl chloride.

Claims 11-19 (Cancelled).

20. (Currently Amended) ~~The A~~ labeling reagent according to claim 11, comprising a sulfenyl compound represented by the general formula:



(wherein R represents an organic group having at least one constituent element labeled with an isotope, and X represents a leaving group),

wherein the sulfenyl compound is selected from the group consisting of 2-nitro[¹³C₆] benzenesulfenyl chloride, 4-nitro[¹³C₆] benzenesulfenyl chloride, 2, 4-dinitro[¹³C₆] benzenesulfenyl chloride, and 2-nitro-4-carboxy[¹³C₆] benzenesulfenyl chloride.

21. (Currently Amended) The labeling reagent according to claim-~~11~~ 20, in a use for peptide analysis.

22. (Currently Amended) The labeling reagent according to claim-~~11~~ 20, separately including each of:

one compound selected from the sulfenyl compounds, and
a compound (light reagent) which has the same structure as the selected one compound (heavy reagent) and ~~does-is~~ not labeled with the isotope.

Claims 23-31 (Cancelled).

32. (Currently Amended) ~~The A~~ method of analyzing peptide ~~according to claim 23,~~
using a labeling reagent comprising a sulfenyl compound represented by the general formula:



(wherein R represents an organic group having at least one constituent element labeled with an isotope, and X represents a leaving group).

wherein the isotope-labeled sulfenyl compound of the formula (I) is selected from the group consisting of 2-nitro[¹³C₆] benzenesulfenyl chloride, 4-nitro[¹³C₆] benzenesulfenyl chloride, 2, 4-dinitro[¹³C₆] benzenesulfenyl chloride, and 2-nitro-4-carboxy[¹³C₆] benzenesulfenyl chloride.

33. (Currently Amended) The method of analyzing peptide according to claim-~~23~~ 32, wherein the labeling reagent separately including each of:

one compound selected from the sulfenyl compounds, and
a compound (light reagent) which has the same structure as the selected one compound (heavy reagent) and does not labeled with the isotope.

34. (Currently Amended) The method of analyzing peptide according to claim-~~23~~ 32, comprising labeling an amino acid residue of a peptide of interest by using the labeling reagent, and subjecting the resulting labeled peptide to mass spectrometry measurement.

35. (Currently Amended) The method of analyzing peptide according to claim 34, comprising:

(i) labeling the peptide of interest with either one of: one compound (heavy reagent) selected from the sulfenyl compounds; and a compound (light reagent) which has the same structure as the selected one compound and ~~does-is~~ not labeled with the isotope, to thereby obtain the labeled peptide of interest;

(ii) separately labeling a control peptide with the other of the heavy reagent and the light reagent to thereby obtain the labeled control peptide;

(iii) mixing the labeled peptide of interest obtained in (i) with the labeled controlled peptide obtained in (ii); and

(iv) subjecting the mixed labeled peptides to mass spectrometry measurement.

36. (Original) The method of analyzing peptide according to claim 34, optionally comprising enzymatic digestion and/or a chemical treatment comprising reduction and alkylation.

37. (Original) The method of analyzing peptide according to claim 36, wherein the enzymatic digestion is carried out before or after the labeling.

38. (Original) The method of analyzing peptide according to claim 36, wherein the chemical treatment is carried out before or after the labeling.

39. (Original) The method of analyzing peptide according to claim 36, wherein the chemical treatment, the enzymatic digestion, and the labeling are carried out in this order.

40. (Original) The method of analyzing peptide according to claim 36, wherein the chemical treatment, the labeling, and the enzymatic digestion are carried out in this order.

41. (Original) The method of analyzing peptide according to claim 36, wherein the labeling, the chemical treatment, and the enzymatic digestion are carried out in this order.

42. (Original) The method of analyzing peptide according to claim 34, comprising, after the labeling, optionally purifying the labeled peptide including separation by gel filtration and separation on a reversed-phase column.

43. (Original) The method of analyzing peptide according to claim 34, wherein the amino acid residue is tryptophan residue.

Claims 44-45 (Cancelled).